

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

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| Applicant's or agent's file reference P105168.WO02 | FOR FURTHER ACTION | See item 4 below |
| International application No. PCT/GB2008/051042 | International filing date (<i>day/month/year</i>) 07 November 2008 (07.11.2008) | Priority date (<i>day/month/year</i>) 09 November 2007 (09.11.2007) |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | |
| Applicant PURSUIT DYNAMICS PLC | | |

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|-------------------------------------|--|---|-----------|---------------------|--------------------------|------------|----------|--------------------------|-------------|--|--------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|--------------------------|-------------|--|--------------------------|--------------|---|
| 1. | This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a). | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | This REPORT consists of a total of 6 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead. | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | <p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 80%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> | <input checked="" type="checkbox"/> | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. II | Priority | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VI | Certain documents cited | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | The International Bureau will communicate this report to designated Offices in accordance with Rules 44 <i>bis</i> .3(c) and 93 <i>bis</i> .1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44 <i>bis</i> .2). | | | | | | | | | | | | | | | | | | | | | | | | |

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|---|--|---|--|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Date of issuance of this report 11 May 2010 (11.05.2010)</td> </tr> <tr> <td style="padding: 5px;"> Authorized officer <div style="text-align: center; font-weight: bold;">Dorothee Mülhausen</div> </td> </tr> </table> e-mail: pt01.pct@wipo.int | Date of issuance of this report 11 May 2010 (11.05.2010) | Authorized officer <div style="text-align: center; font-weight: bold;">Dorothee Mülhausen</div> |
| Date of issuance of this report 11 May 2010 (11.05.2010) | | | |
| Authorized officer <div style="text-align: center; font-weight: bold;">Dorothee Mülhausen</div> | | | |

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2008/051042

International filing date (day/month/year)
07.11.2008

Priority date (day/month/year)
09.11.2007

International Patent Classification (IPC) or both national classification and IPC
INV. A61L2/22 B05B7/06 B05B1/06

Applicant
PURSUIT DYNAMICS PLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2008/051042

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ on paper
 - ☐ in electronic form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in electronic form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2008/051042

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|-----------------------------|
| Novelty (N) | Yes: Claims | |
| | No: Claims | <u>1, 15, 28, 29, 34-36</u> |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | <u>1-36</u> |
| Industrial applicability (IA) | Yes: Claims | <u>1-36</u> |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Re Item V.

Reference is made to the following documents:

- D1 : WO 2005/082546 A (PURSUIT DYNAMICS PLC [GB]; FENTON MARCUS BRIAN MAYHALL [GB]; HEATHCOTE) 9 September 2005 (2005-09-09)
- D2 : WO 94/08724 A (CASEY ALAN PATRICK [AU]) 28 April 1994 (1994-04-28)
- D3: WO 01/76764 A (CHROBAK JULIUS [SK]) 18 October 2001 (2001-10-18)
cited in the application
- D4: WO 03/072952 A (PURSUIT DYNAMICS PLC [GB]; TODMAN MICHAEL TORR [GB]; FENTON MARCUS BRI) 4 September 2003 (2003-09-04)
- D5: US-B1-6 405 944 (BENALIKHOUDJA KARIM [FR]) 18 June 2002 (2002-06-18)

1. Coaxial nozzles for providing a mist of a liquid by entraining the liquid from one channel into a gas moving at high velocity in another channel is well-known [vide D1-D5].
 - 1.1 D1 discloses several designs for such nozzles, some of which comprising a throat portion in the center fluid channel which has a smaller cross sectional area than both the inlet and outlet of said channel. The area ratio between the throat portion and the outlet is not explicitly mentioned, but could be assumed to be within the range of 2:3 to 1:4. The inclination between the center channel and the surrounding channel(s) appears to be in the range of 15-25 degrees [figures 16-19, 21]. In any event it is evident to the skilled person that various characteristics of the droplet formation may be obtained by varying the angle [See corresponding text to the figures on pages 42-45]. The device according to D1 can be used to generate a mist if a disinfectant [page 63, 1st §]. It is also foreseen that the outer channel may have a throat portion [see the figures].
 - 1.2 Accordingly, at least the subject-matter of independent claims 1, 15, 28, 29 and 34-36 lacks novelty (Art. 33(2) PCT).
2. A similar disclosure is found in D2 [page 12, lines 14-23; page 15 lines 13-21 and figures] (Art. 33(2) PCT). Admittedly, D2 does not explicitly mention the use of the

device for sterilising purposes but rather for use in a combustion engine. Nevertheless, the device can be considered suitable for such purpose and alternative uses in general have been implied [page 1, lines 8-10].

3. Dependent claims 2-14, 16-27 and 30-33 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.
- 3.1 In said claims only slight constructional change in the subject matter of the independent claims are defined and which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of said dependent claims at least lacks an inventive step (Art. 33(3) PCT).